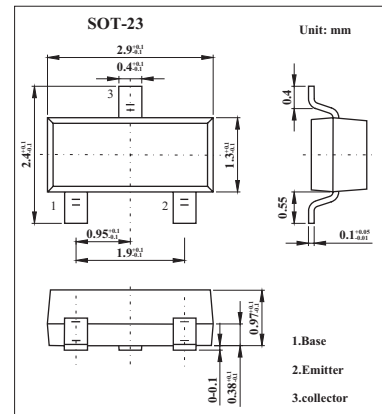


PNP General Purpose Transistor

■ Features

- Low current (max. 100 mA).
- Low voltage (max. 65 V).



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	BC856	BC857	BC858	Unit
Collector-base voltage	V_{CB0}	-80	-50	-30	V
Collector-emitter voltage	V_{CEO}	-65	-45	-30	V
Emitter-base voltage	V_{EBO}	-5			V
Collector current	I_C	-100			mA
Peak collector current	I_{CM}	-200			mA
Peak base current	I_{BM}	-200			mA
Total power dissipation *	P_{tot}	250			mW
Junction temperature	T_j	150			$^\circ\text{C}$
Storage temperature	T_{stg}	-65 to +150			$^\circ\text{C}$
Operating ambient temperature	R_{amb}	-65 to +150			$^\circ\text{C}$
Thermal resistance from junction to ambient *	$R_{th\ j-a}$	500			K/W

* Transistor mounted on an FR4 printed-circuit board, standard footprint.

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -30\text{ V}, I_E = 0$		-1	-15	nA
	I_{CBO}	$V_{CB} = -30\text{ V}, I_E = 0, T_j = 150^\circ\text{C}$			-4	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -5\text{ V}, I_C = 0$			-100	nA
DC current gain	BC856	$I_C = -2\text{ mA}; V_{CE} = -5\text{ V}$	125		475	
	BC857		125		800	
	BC856A,BC857A		125		250	
	BC856B,BC857B,BC858B		220		475	
	BC857C		420		800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10\text{ mA}; I_B = -0.5\text{ mA}$		-75	-300	mV
		$I_C = -100\text{ mA}; I_B = -5\text{ mA}; *$		-250	-650	mV
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -10\text{ mA}; I_B = -0.5\text{ mA}$		-700		mV
		$I_C = -100\text{ mA}; I_B = -5\text{ mA}; *$		-850		mV
Base-emitter voltage	V_{BE}	$I_C = -2\text{ mA}; V_{CE} = -5\text{ V}$	-600	-650	-750	mV
		$I_C = -10\text{ mA}; V_{CE} = -5\text{ V}$			-820	mV
Collector capacitance	C_C	$V_{CB} = -10\text{ V}; I_E = I_C = 0; f = 1\text{ MHz}$		4.5		pF
Transition frequency	f_T	$V_{CE} = -5\text{ V}; I_C = -10\text{ mA}; f = 100\text{ MHz}$	100			MHz
Noise figure	NF	$I_C = -200\ \mu\text{A}; V_{CE} = -5\text{ V}; R_s = 2\text{ k}\Omega; f = 1\text{ kHz}; B = 200\text{ Hz}$		2	10	dB

* Pulse test: $t_p \leq 300\ \mu\text{s}, \delta \leq 0.02$.